

WHAT IS CLAIMED IS:

1. An AC type plasma display panel (PDP) drive method, in which a plurality of X electrodes and a plurality of Y electrodes are alternately disposed in parallel to each other on one of two insulating substrates opposed to each other, a plurality of data electrodes are disposed on the other insulating substrate so as to be orthogonal to the X electrodes and Y electrodes, a gap between one X electrode and a Y electrode adjacent to one side of the X electrode is 5 formed as a discharge gap, and a gap between the X electrode and a Y electrode adjacent to the other side of the X electrode is formed as a non-discharge gap, pixels arranged in a matrix form are formed at intersections between the discharge gaps and data electrodes, and every several X 10 electrodes and every several Y electrodes are made to share 15 a driver each,

20 said method comprising a step of writing to the pixels to form wall charges based on display data, the same amount of wall charge being written to the X electrode and Y electrode in one pixel, and lighting and non-lighting of the pixels being controlled in accordance with the wall charge amount.

2. An AC type plasma display panel (PDP) drive method, in which a plurality of X electrodes and a plurality of Y electrodes are alternately disposed in parallel to each other on one of two insulating substrates opposed to each other, a plurality of data electrodes are disposed on the other insulating substrate so as to be orthogonal to the X 25 electrodes and Y electrodes.

electrodes and Y electrodes, a gap between one X electrode and a Y electrode adjacent to one side of the X electrode is formed as a discharge gap, and a gap between the X electrode and a Y electrode adjacent to the other side of the X

5 electrode is formed as a non-discharge gap, pixels arranged in a matrix form are formed at intersections between the discharge gaps and data electrodes, and every several X electrodes and every several Y electrodes are made to share a driver each,

10 said method comprising a step of writing to the pixels to form wall charges based on display data, wall charges being written upon making the potentials of the X electrode and Y electrode in one pixel equal to each other, and lighting and non-lighting of the pixel being controlled in 15 accordance with the wall charge amount.

3. An AC type plasma display panel (PDP) drive method, in which a plurality of X electrodes and a plurality of Y electrodes are alternately disposed in parallel to each other on one of two insulating substrates opposed to each 20 other, a plurality of data electrodes are disposed on the other insulating substrate so as to be orthogonal to the X electrodes and Y electrodes, a gap between one X electrode and a Y electrode adjacent to one side of the X electrode is formed as a discharge gap, and a gap between the X electrode and a Y electrode adjacent to the other side of the X 25 electrode is formed as a non-discharge gap, pixels arranged in a matrix form are formed at intersections between the discharge gaps and data electrodes, and every several X

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electrodes and every several Y electrodes are made to share a driver each,

5 said method comprising a step of writing to the pixels to form wall charges based on display data, the voltage of the wall charges formed on the X electrode and Y electrode in one pixel being at a level at which surface discharge does not occur between the X electrodes and Y electrodes even if the sustaining pulse voltage is added to said voltage.

10 4. An AC type PDP drive method according to Claim 1, wherein sustaining discharge for display is initially started by means of opposed discharge.

15 5. An AC type PDP drive method according to Claim 2, wherein sustaining discharge for display is initially started by means of opposed discharge.

6. An AC type PDP drive method according to Claim 3, wherein sustaining discharge for display is initially started by means of opposed discharge.

7. An AC type plasma display panel (PDP) drive 20 method, in which a plurality of X electrodes and a plurality of Y electrodes are alternately disposed in parallel to each other on one of two insulating substrates opposed to each other, a plurality of data electrodes are disposed on the other insulating substrate so as to be orthogonal to the X 25 electrodes and Y electrodes, a gap between one X electrode and a Y electrode adjacent to one side of the X electrode is formed as a discharge gap, and all gaps between the X electrodes and Y electrodes are formed as discharge gaps,

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pixels arranged in a matrix form are formed at intersections between the discharge gaps and data electrodes, and means for dividing surface discharge occurring between the X electrodes and Y electrodes are provided at the boundaries 5 between the pixels and the adjacent pixels in the data electrode direction on the X electrodes and Y electrodes, and either every several X electrodes or Y electrodes are made to share a driver,

10 said method comprising a step of writing to the pixels to form wall charges based on display data, the same amount of wall charge being written into the X electrode and Y electrode in one pixel, and lighting and non-lighting of the pixel being controlled in accordance with the wall charge amount.

15 8. An AC type plasma display panel (PDP) drive method, in which a plurality of X electrodes and a plurality of Y electrodes are alternately disposed in parallel to each other on one of two insulating substrates opposed to each other, a plurality of data electrodes are disposed on the 20 other insulating substrate so as to be orthogonal to the X electrodes and Y electrodes, and all gaps between the X electrodes and Y electrodes are formed as discharge gaps, pixels arranged in a matrix form are formed at intersections between the discharge gaps and data electrodes, and means 25 for dividing surface discharge occurring between the X electrodes and Y electrodes are provided at the boundaries between the pixels and the adjacent pixels in the data electrode direction on the X electrodes and Y electrodes,

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and either every several X electrodes or Y electrodes are made to share a driver,

5 said method comprising a step of writing to the pixels to form wall charges based on display data, wall charges being written upon making the potentials of the X electrodes and Y electrodes in one pixel equal to each other, and lighting and non-lighting of the pixel being controlled in accordance with the wall charge amount.

9. An AC type plasma display panel (PDP) drive 10 method, in which a plurality of X electrodes and a plurality of Y electrodes are alternately disposed in parallel to each other on one of two insulating substrates opposed to each other, a plurality of data electrodes are disposed on the other insulating substrate so as to be orthogonal to the X 15 electrodes and Y electrodes, and all gaps between the X electrodes and Y electrodes are formed as discharge gaps, pixels arranged in a matrix form are formed at intersections between the discharge gaps and data electrodes, and means for dividing surface discharge occurring between the X 20 electrodes and Y electrodes are provided at the boundaries between the pixels and the adjacent pixels in the data electrode direction on the X electrodes and Y electrodes, and either every several X electrodes or Y electrodes are made to share a driver,

25 said method comprising a step of writing to the pixels to form wall charges based on display data, the voltage of the wall charges formed on the X electrode and Y electrode in one pixel being at a level at which surface discharge

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does not occur between the X electrode and Y electrode even if the voltage of the sustaining pulse is added to said voltage.

10. An AC type PDP drive method according to Claim 5 7, wherein sustaining discharge for display is initially started by means of opposed discharge.

11. An AC type PDP drive method according to Claim 8, wherein sustaining discharge for display is initially started by means of opposed discharge.

10 12. An AC type PDP drive method according to Claim 9, wherein sustaining discharge for display is initially started by means of opposed discharge.

13. An AC type PDP drive method according to Claim 4, wherein said opposed discharge is generated using the 15 data electrodes as positive electrodes.

14. An AC type PDP drive method according to Claim 5, wherein said opposed discharge is generated using the data electrodes as positive electrodes.

15. An AC type PDP drive method according to Claim 20 6, wherein said opposed discharge is generated using the data electrodes as positive electrodes.

16. An AC type PDP drive method according to Claim 10, wherein said opposed discharge is generated using the data electrodes as positive electrodes.

25 17. An AC type PDP drive method according to Claim 11, wherein said opposed discharge is generated using the data electrodes as positive electrodes.

18. An AC type PDP drive method according to Claim

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12, wherein said opposed discharge is generated using the data electrodes as positive electrodes.

19. An AC type PDP drive method according to Claim 1, wherein, prior to writing, wall charges with polarities 5 opposite to each other are formed on the X electrodes and Y electrodes, respectively, and writing discharge is caused by means of erasing and writing in which the wall charges are adjusted when applying data pulses.

20. An AC type PDP drive method according to Claim 10 2, wherein, prior to writing, wall charges with polarities opposite to each other are formed on the X electrodes and Y electrodes, respectively, and writing discharge is caused by means of erasing and writing in which the wall charges are adjusted when applying data pulses.

15 21. An AC type PDP drive method according to Claim 3, wherein, prior to writing, wall charges with polarities opposite to each other are formed on the X electrodes and Y electrodes, respectively, and writing discharge is caused by means of erasing and writing in which the wall charges are 20 adjusted when applying data pulses.

22. An AC type PDP drive method according to Claim 7, wherein, prior to writing, wall charges with polarities opposite to each other are formed on the X electrodes and Y electrodes, respectively, and writing discharge is caused by 25 means of erasing and writing in which the wall charges are adjusted when applying data pulses.

23. An AC type PDP drive method according to Claim 8, wherein, prior to writing, wall charges with polarities

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opposite to each other are formed on the X electrodes and Y electrodes, respectively, and writing discharge is caused by means of erasing and writing in which the wall charges are adjusted when applying data pulses.

5        24. An AC type PDP drive method according to Claim 9, wherein, prior to writing, wall charges with polarities opposite to each other are formed on the X electrodes and Y electrodes, respectively, and writing discharge is caused by means of erasing and writing in which the wall charges are 10 adjusted when applying data pulses.

25. An AC type PDP drive method according to Claim 19, wherein the erasing and writing are caused between the X electrodes and Y electrodes.

15        26. An AC type PDP drive method according to Claim 20, wherein the erasing and writing are caused between the X electrodes and Y electrodes.

27. An AC type PDP drive method according to Claim 21, wherein the erasing and writing are caused between the X electrodes and Y electrodes.

20        28. An AC type PDP drive method according to Claim 22, wherein the erasing and writing are caused between the X electrodes and Y electrodes.

25        29. An AC type PDP drive method according to Claim 23, wherein the erasing and writing are caused between the X electrodes and Y electrodes.

30. An AC type PDP drive method according to Claim 24, wherein the erasing and writing are caused between the X electrodes and Y electrodes.

31. An AC type PDP drive method according to Claim 19, wherein wall charges with opposite polarities, which are formed on the X electrode and Y electrode, are formed by means of surface discharge between the X electrodes and Y 5 electrodes prior to the writing.

32. An AC type PDP drive method according to Claim 20, wherein wall charges with opposite polarities, which are formed on the X electrode and Y electrode, are formed by means of surface discharge between the X electrodes and Y 10 electrodes prior to the writing.

33. An AC type PDP drive method according to Claim 21, wherein wall charges with opposite polarities, which are formed on the X electrode and Y electrode, are formed by means of surface discharge between the X electrodes and Y 15 electrodes prior to the writing.

34. An AC type PDP drive method according to Claim 22, wherein wall charges with opposite polarities, which are formed on the X electrode and Y electrode, are formed by means of surface discharge between the X electrodes and Y 20 electrodes prior to the writing.

35. An AC type PDP drive method according to Claim 23, wherein wall charges with opposite polarities, which are formed on the X electrode and Y electrode, are formed by means of surface discharge between the X electrodes and Y 25 electrodes prior to the writing.

36. An AC type PDP drive method according to Claim 24, wherein wall charges with opposite polarities, which are formed on the X electrode and Y electrode, are formed by

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means of surface discharge between the X electrodes and Y electrodes prior to the writing.

37. An AC type PDP drive method according to Claim 31, wherein wall charges with opposite polarities to be formed on the X electrodes and Y electrodes are formed when the writing is carried out into said another X electrode and Y electrode in said X electrode group and Y electrode group.

38. An AC-type PDP drive method according to Claim 32, wherein wall charges with opposite polarities to be formed on the X electrodes and Y electrodes are formed when the writing is carried out into said another X electrode and Y electrode in said X electrode group and Y electrode group.

39. An AC type PDP drive method according to Claim 33, wherein wall charges with opposite polarities to be formed on the X electrodes and Y electrodes are formed when the writing is carried out into said another X electrode and Y electrode in said X electrode group and Y electrode group.

40. An AC type PDP drive method according to Claim 34, wherein wall charges with opposite polarities to be formed on the X electrodes and Y electrodes are formed when the writing is carried out into said another X electrode and Y electrode in said X electrode group and Y electrode group.

41. An AC type PDP drive method according to Claim  
35, wherein wall charges with opposite polarities to be  
25 formed on the X electrodes and Y electrodes are formed when  
the writing is carried out into said another X electrode and  
Y electrode in said X electrode group and Y electrode group.

42. An AC type PDP drive method according to Claim

36, wherein wall charges with opposite polarities to be formed on the X electrodes and Y electrodes are formed when the writing is carried out into said another X electrode and Y electrode in said X electrode group and Y electrode group.

5        43. An AC type PDP drive method according to Claim 4, wherein the scanning sustaining separation method is employed in that a scanning period in which the writing is carried out and the sustaining period in which sustaining discharge is caused are separated in terms of time.

10       44. An AC type PDP drive method according to Claim 5, wherein the scanning sustaining separation method is employed in that a scanning period in which the writing is carried out and the sustaining period in which sustaining discharge is caused are separated in terms of time.

15       45. An AC type PDP drive method according to Claim 6, wherein the scanning sustaining separation method is employed in that a scanning period in which the writing is carried out and the sustaining period in which sustaining discharge is caused are separated in terms of time.

20       46. An AC type PDP drive method according to Claim 10, wherein the scanning sustaining separation method is employed in that a scanning period in which the writing is carried out and the sustaining period in which sustaining discharge is caused are separated in terms of time.

25       47. An AC type PDP drive method according to Claim 11, wherein the scanning sustaining separation method is employed in that a scanning period in which the writing is carried out and the sustaining period in which sustaining

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discharge is caused are separated in terms of time.

48. An AC type PDP drive method according to Claim 12, wherein the scanning sustaining separation method is employed in that a scanning period in which the writing is 5 carried out and the sustaining period in which sustaining discharge is caused are separated in terms of time.

49. An AC type PDP drive method according to Claim 43, wherein wall charges with opposite polarities, which are formed on the X electrodes and Y electrodes when writing, 10 are formed by means of surface discharge between the X electrodes and Y electrodes, and before the scanning period, the same pulse is applied to all the X electrodes and the same pulse with an opposite polarity to that of the pulse applied to the X electrodes is applied to all the Y 15 electrodes, whereby wall charges with opposite polarities are formed on all the X electrodes and Y electrodes by a one-time pulse application.

50. An AC type PDP drive method according to Claim 44, wherein wall charges with opposite polarities, which are 20 formed on the X electrodes and Y electrodes when writing, are formed by means of surface discharge between the X electrodes and Y electrodes, and before the scanning period, the same pulse is applied to all the X electrodes and the same pulse with an opposite polarity to that of the pulse 25 applied to the X electrodes is applied to all the Y electrodes, whereby wall charges with opposite polarities are formed on all the X electrodes and Y electrodes by a one-time pulse application.

51. An AC type PDP drive method according to Claim 45, wherein wall charges with opposite polarities, which are formed on the X electrodes and Y electrodes when writing, are formed by means of surface discharge between the X 5 electrodes and Y electrodes, and before the scanning period, the same pulse is applied to all the X electrodes and the same pulse with an opposite polarity to that of the pulse applied to the X electrodes is applied to all the Y electrodes, whereby wall charges with opposite polarities 10 are formed on all the X electrodes and Y electrodes by a one-time pulse application.

52. An AC type PDP drive method according to Claim 46, wherein wall charges with opposite polarities, which are formed on the X electrodes and Y electrodes when writing, 15 are formed by means of surface discharge between the X electrodes and Y electrodes, and before the scanning period, the same pulse is applied to all the X electrodes and the same pulse with an opposite polarity to that of the pulse applied to the X electrodes is applied to all the Y electrodes, whereby wall charges with opposite polarities 20 are formed on all the X electrodes and Y electrodes by a one-time pulse application.

53. An AC type PDP drive method according to Claim 47, wherein wall charges with opposite polarities, which are 25 formed on the X electrodes and Y electrodes when writing, are formed by means of surface discharge between the X electrodes and Y electrodes, and before the scanning period, the same pulse is applied to all the X electrodes and the

same pulse with an opposite polarity to that of the pulse applied to the X electrodes is applied to all the Y electrodes, whereby wall charges with opposite polarities are formed on all the X electrodes and Y electrodes by a 5 one-time pulse application.

54. An AC type PDP drive method according to Claim 48, wherein wall charges with opposite polarities, which are formed on the X electrodes and Y electrodes when writing, are formed by means of surface discharge between the X 10 electrodes and Y electrodes, and before the scanning period, the same pulse is applied to all the X electrodes and the same pulse with an opposite polarity to that of the pulse applied to the X electrodes is applied to all the Y electrodes, whereby wall charges with opposite polarities 15 are formed on all the X electrodes and Y electrodes by a one-time pulse application.

55. An AC type PDP drive method according to Claim 49, wherein, to the adjacent X electrode and Y electrode into which display data is to be written first, writing is 20 carried out upon making the potentials of wall charges with opposite polarities to be formed on the X electrode and Y electrode to each other, and thereafter, the Y electrodes or X electrodes adjacent to the X electrodes or Y electrodes into which the writing has been already carried out are 25 successively changed to have the same potential as the potential when writing, whereby the writing is carried out.

56. An AC type PDP drive method according to Claim 50, wherein, to the adjacent X electrode and Y electrode

into which display data is to be written first, writing is carried out upon making the potentials of wall charges with opposite polarities to be formed on the X electrode and Y electrode to each other, and thereafter, the Y electrodes or 5 X electrodes adjacent to the X electrodes or Y electrodes into which the writing has been already carried out are successively changed to have the same potential as the potential when writing, whereby the writing is carried out.

57. An AC type PDP drive method according to Claim 10 51, wherein, to the adjacent X electrode and Y electrode into which display data is to be written first, writing is carried out upon making the potentials of wall charges with opposite polarities to be formed on the X electrode and Y electrode to each other, and thereafter, the Y electrodes or 15 X electrodes adjacent to the X electrodes or Y electrodes into which the writing has been already carried out are successively changed to have the same potential as the potential when writing, whereby the writing is carried out.

58. An AC type PDP drive method according to Claim 20 52, wherein, to the adjacent X electrode and Y electrode into which display data is to be written first, writing is carried out upon making the potentials of wall charges with opposite polarities to be formed on the X electrode and Y electrode to each other, and thereafter, the Y electrodes or 25 X electrodes adjacent to the X electrodes or Y electrodes into which the writing has been already carried out are successively changed to have the same potential as the potential when writing, whereby the writing is carried out.

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59. An AC type PDP drive method according to Claim 53, wherein, to the adjacent X electrode and Y electrode into which display data is to be written first, writing is carried out upon making the potentials of wall charges with 5 opposite polarities to be formed on the X electrode and Y electrode to each other, and thereafter, the Y electrodes or X electrodes adjacent to the X electrodes or Y electrodes into which the writing has been already carried out are successively changed to have the same potential as the 10 potential when writing, whereby the writing is carried out.

60. An AC type PDP drive method according to Claim 54, wherein, to the adjacent X electrode and Y electrode into which display data is to be written first, writing is carried out upon making the potentials of wall charges with 15 opposite polarities to be formed on the X electrode and Y electrode to each other, and thereafter, the Y electrodes or X electrodes adjacent to the X electrodes or Y electrodes into which the writing has been already carried out are successively changed to have the same potential as the 20 potential when writing, whereby the writing is carried out.

61. An AC type PDP drive method according to Claim 55, wherein the data pulse voltage to be applied to the data electrodes when writing in the scanning period is changed in accordance with gradations to be displayed to adjust the 25 wall charge amounts to be formed by means of writing a discharge and changes the data electrode potential in the sustaining period, whereby the sustaining discharge timing is changed in accordance with gradations and gradation

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display is carried out.

62. An AC type PDP drive method according to Claim 56, wherein the data pulse voltage to be applied to the data electrodes when writing in the scanning period is changed in accordance with gradations to be displayed to adjust the wall charge amounts to be formed by means of writing a discharge and changes the data electrode potential in the sustaining period, whereby the sustaining discharge timing is changed in accordance with gradations and gradation display is carried out.

63. An AC type PDP drive method according to Claim 57, wherein the data pulse voltage to be applied to the data electrodes when writing in the scanning period is changed in accordance with gradations to be displayed to adjust the wall charge amounts to be formed by means of writing a discharge and changes the data electrode potential in the sustaining period, whereby the sustaining discharge timing is changed in accordance with gradations and gradation display is carried out.

64. An AC type PDP drive method according to Claim 58, wherein the data pulse voltage to be applied to the data electrodes when writing in the scanning period is changed in accordance with gradations to be displayed to adjust the wall charge amounts to be formed by means of writing a discharge and changes the data electrode potential in the sustaining period, whereby the sustaining discharge timing is changed in accordance with gradations and gradation display is carried out.

65. An AC type PDP drive method according to Claim 59, wherein the data pulse voltage to be applied to the data electrodes when writing in the scanning period is changed in accordance with gradations to be displayed to adjust the 5 wall charge amounts to be formed by means of writing a discharge and changes the data electrode potential in the sustaining period, whereby the sustaining discharge timing is changed in accordance with gradations and gradation display is carried out.

10 66. An AC type PDP drive method according to Claim 60, wherein the data pulse voltage to be applied to the data electrodes when writing in the scanning period is changed in accordance with gradations to be displayed to adjust the wall charge amounts to be formed by means of writing a 15 discharge and changes the data electrode potential in the sustaining period, whereby the sustaining discharge timing is changed in accordance with gradations and gradation display is carried out.

67. An AC type PDP drive method according to Claim 20 61, wherein, in the sustaining period, in accordance with gradations, discharge at a sustaining discharge starting timing becomes opposed discharge between the X electrodes and data electrodes or between the Y electrodes and data electrodes.

25 68. An AC type PDP drive method according to Claim 62, wherein, in the sustaining period, in accordance with gradations, discharge at a sustaining discharge starting timing becomes opposed discharge between the X electrodes

and data electrodes or between the Y electrodes and data electrodes.

69. An AC type PDP drive method according to Claim 63, wherein, in the sustaining period, in accordance with 5 gradations, discharge at a sustaining discharge starting timing becomes opposed discharge between the X electrodes and data electrodes or between the Y electrodes and data electrodes.

70. An AC type PDP drive method according to Claim 10 64, wherein, in the sustaining period, in accordance with gradations, discharge at a sustaining discharge starting timing becomes opposed discharge between the X electrodes and data electrodes or between the Y electrodes and data electrodes.

15 71. An AC type PDP drive method according to Claim 65, wherein, in the sustaining period, in accordance with gradations, discharge at a sustaining discharge starting timing becomes opposed discharge between the X electrodes and data electrodes or between the Y electrodes and data 20 electrodes.

72. An AC type PDP drive method according to Claim 66, wherein, in the sustaining period, in accordance with gradations, discharge at a sustaining discharge starting timing becomes opposed discharge between the X electrodes 25 and data electrodes or between the Y electrodes and data electrodes.

73. An AC type PDP drive method according to Claim 67, wherein the data electrodes become positive electrodes

in opposed discharge.

74. An AC type PDP drive method according to Claim 68, wherein the data electrodes become positive electrodes in opposed discharge.

5 75. An AC type PDP drive method according to Claim 69, wherein the data electrodes become positive electrodes in opposed discharge.

10 76. An AC type PDP drive method according to Claim 70, wherein the data electrodes become positive electrodes in opposed discharge.

77. An AC type PDP drive method according to Claim 71, wherein the data electrodes become positive electrodes in opposed discharge.

15 78. An AC type PDP drive method according to Claim 72, wherein the data electrodes become positive electrodes in opposed discharge.

20 79. An AC type PDP drive method according to Claim 73, wherein the potential difference between electrodes at locations at which the opposed discharge occurs at the timing of starting the sustaining discharge is gradually increased in the sustaining period.

25 80. An AC type PDP drive method according to Claim 74, wherein the potential difference between electrodes at locations at which the opposed discharge occurs at the timing of starting the sustaining discharge is gradually increased in the sustaining period.

81. An AC type PDP drive method according to Claim 75, wherein the potential difference between electrodes at

locations at which the opposed discharge occurs at the timing of starting the sustaining discharge is gradually increased in the sustaining period.

82. An AC type PDP drive method according to Claim 5 76, wherein the potential difference between electrodes at locations at which the opposed discharge occurs at the timing of starting the sustaining discharge is gradually increased in the sustaining period.

83. An AC type PDP drive method according to Claim 10 77, wherein the potential difference between electrodes at locations at which the opposed discharge occurs at the timing of starting the sustaining discharge is gradually increased in the sustaining period.

84. An AC type PDP drive method according to Claim 15 78, wherein the potential difference between electrodes at locations at which the opposed discharge occurs at the timing of starting the sustaining discharge is gradually increased in the sustaining period.

85. An AC type PDP drive method according to Claim 20 79, wherein the sustaining pulse voltage is fixed, and by changing the potential of the data electrodes in the sustaining period, the potential difference between the electrodes at portions at which opposed discharge occurs at the sustaining discharge starting timing is gradually increased in the sustaining period.

86. An AC type PDP drive method according to Claim 80, wherein the sustaining pulse voltage is fixed, and by changing the potential of the data electrodes in the

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sustaining period, the potential difference between the electrodes at portions at which opposed discharge occurs at the sustaining discharge starting timing is gradually increased in the sustaining period.

5        87. An AC type PDP drive method according to Claim 81, wherein the sustaining pulse voltage is fixed, and by changing the potential of the data electrodes in the sustaining period, the potential difference between the electrodes at portions at which opposed discharge occurs at 10 the sustaining discharge starting timing is gradually increased in the sustaining period.

88        An AC type PDP drive method according to Claim 82, wherein the sustaining pulse voltage is fixed, and by changing the potential of the data electrodes in the 15 sustaining period, the potential difference between the electrodes at portions at which opposed discharge occurs at the sustaining discharge starting timing is gradually increased in the sustaining period.

89        An AC type PDP drive method according to Claim 20 83, wherein the sustaining pulse voltage is fixed, and by changing the potential of the data electrodes in the sustaining period, the potential difference between the electrodes at portions at which opposed discharge occurs at the sustaining discharge starting timing is gradually increased in the sustaining period.

90        An AC type PDP drive method according to Claim 84, wherein the sustaining pulse voltage is fixed, and by changing the potential of the data electrodes in the

sustaining period, the potential difference between the electrodes at portions at which opposed discharge occurs at the sustaining discharge starting timing is gradually increased in the sustaining period.

5        91. An AC type PDP drive method according to Claim 79, wherein, by changing the potential of the data electrodes in phases in the sustaining period, the potential difference between the electrodes at portions at which opposed discharge occurs at the timing of starting the 10 sustaining discharge is gradually increased.

92. An AC type PDP drive method according to Claim 80, wherein, by changing the potential of the data electrodes in phases in the sustaining period, the potential difference between the electrodes at portions at which 15 opposed discharge occurs at the timing of starting the sustaining discharge is gradually increased.

93. An AC type PDP drive method according to Claim 81, wherein, by changing the potential of the data electrodes in phases in the sustaining period, the potential 20 difference between the electrodes at portions at which opposed discharge occurs at the timing of starting the sustaining discharge is gradually increased.

94. An AC type PDP drive method according to Claim 82, wherein, by changing the potential of the data 25 electrodes in phases in the sustaining period, the potential difference between the electrodes at portions at which opposed discharge occurs at the timing of starting the sustaining discharge is gradually increased.

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95. An AC type PDP drive method according to Claim 83, wherein, by changing the potential of the data electrodes in phases in the sustaining period, the potential difference between the electrodes at portions at which 5 opposed discharge occurs at the timing of starting the sustaining discharge is gradually increased.

96. An AC type PDP drive method according to Claim 84, wherein, by changing the potential of the data electrodes in phases in the sustaining period, the potential 10 difference between the electrodes at portions at which opposed discharge occurs at the timing of starting the sustaining discharge is gradually increased.

97. An AC type PDP drive method according to Claim 91, wherein the potential of the data electrodes at timings 15 other than the timing of starting the sustaining discharge is set to be in between the data electrode potential and sustaining pulse potential at the timing of starting the first sustaining discharge in the sustaining period.

98. An AC type PDP drive method according to Claim 20 92, wherein the potential of the data electrodes at timings other than the timing of starting the sustaining discharge is set to be in between the data electrode potential and sustaining pulse potential at the timing of starting the first sustaining discharge in the sustaining period.

25 99. An AC type PDP drive method according to Claim 93, wherein the potential of the data electrodes at timings other than the timing of starting the sustaining discharge is set to be in between the data electrode potential and

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sustaining pulse potential at the timing of starting the first sustaining discharge in the sustaining period.

100. An AC type PDP drive method according to Claim 94, wherein the potential of the data electrodes at timings 5 other than the timing of starting the sustaining discharge is set to be in between the data electrode potential and sustaining pulse potential at the timing of starting the first sustaining discharge in the sustaining period.

101. An AC type PDP drive method according to Claim 95, wherein the potential of the data electrodes at timings other than the timing of starting the sustaining discharge is set to be in between the data electrode potential and sustaining pulse potential at the timing of starting the first sustaining discharge in the sustaining period.

102. An AC type PDP drive method according to Claim 96, wherein the potential of the data electrodes at timings other than the timing of starting the sustaining discharge is set to be in between the data electrode potential and sustaining pulse potential at the timing of starting the 20 first sustaining discharge in the sustaining period.

103. An AC type PDP drive method according to Claim 91, wherein the data electrode potential to be changed in phases is made common with the data pulse potential to be applied in the scanning period.

104. An AC type PDP drive method according to Claim 92, wherein the data electrode potential to be changed in phases is made common with the data pulse potential to be applied in the scanning period.

105. An AC type PDP drive method according to Claim 93, wherein the data electrode potential to be changed in phases is made common with the data pulse potential to be applied in the scanning period.

5 106. An AC type PDP drive method according to Claim 94, wherein the data electrode potential to be changed in phases is made common with the data pulse potential to be applied in the scanning period.

10 107. An AC type PDP drive method according to Claim 95, wherein the data electrode potential to be changed in phases is made common with the data pulse potential to be applied in the scanning period.

15 108. An AC type PDP drive method according to Claim 96, wherein the data electrode potential to be changed in phases is made common with the data pulse potential to be applied in the scanning period.

20 109. An AC type PDP drive method according to Claim 103, wherein the preliminary discharge period in which the condition of wall charges in the sustaining period is reset, the scanning period, and the sustaining period are collectively regarded as one subfield, and a plurality of subfields are joined together to form one field for displaying one screen.

25 110. An AC type PDP drive method according to Claim 104, wherein the preliminary discharge period in which the condition of wall charges in the sustaining period is reset, the scanning period, and the sustaining period are collectively regarded as one subfield, and a plurality of

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subfields are joined together to form one field for displaying one screen.

111. An AC type PDP drive method according to Claim 105, wherein the preliminary discharge period in which the 5 condition of wall charges in the sustaining period is reset, the scanning period, and the sustaining period are collectively regarded as one subfield, and a plurality of subfields are joined together to form one field for displaying one screen.

10 112. An AC type PDP drive method according to Claim 106, wherein the preliminary discharge period in which the condition of wall charges in the sustaining period is reset, the scanning period, and the sustaining period are collectively regarded as one subfield, and a plurality of 15 subfields are joined together to form one field for displaying one screen.

113. An AC type PDP drive method according to Claim 107, wherein the preliminary discharge period in which the condition of wall charges in the sustaining period is reset, 20 the scanning period, and the sustaining period are collectively regarded as one subfield, and a plurality of subfields are joined together to form one field for displaying one screen.

114. An AC type PDP drive method according to Claim 25 108, wherein the preliminary discharge period in which the condition of wall charges in the sustaining period is reset, the scanning period, and the sustaining period are collectively regarded as one subfield, and a plurality of

subfields are joined together to form one field for displaying one screen.

115. An AC type PDP drive method according to Claim 109, wherein the sustaining pulse width at the timing of 5 starting the sustaining discharge is larger than other sustaining pulse widths.

116. An AC type PDP drive method according to Claim 110, wherein the sustaining pulse width at the timing of starting the sustaining discharge is larger than other 10 sustaining pulse widths.

117. An AC type PDP drive method according to Claim 111, wherein the sustaining pulse width at the timing of starting the sustaining discharge is larger than other sustaining pulse widths.

118. An AC type PDP drive method according to Claim 112, wherein the sustaining pulse width at the timing of starting the sustaining discharge is larger than other 15 sustaining pulse widths.

119. An AC type PDP drive method according to Claim 113, wherein the sustaining pulse width at the timing of starting the sustaining discharge is larger than other 20 sustaining pulse widths.

120. An AC type PDP drive method according to Claim 114, wherein the sustaining pulse width at the timing of 25 starting the sustaining discharge is larger than other sustaining pulse widths.

121. An AC type plasma display panel (PDP) comprising:

a plurality of X electrodes and a plurality of Y electrodes being alternately disposed in parallel to each other on one of two insulating substrates opposed to each other, at least either every several X electrodes or Y

5 electrodes being made to share a driver;

a plurality of data electrodes disposed in parallel to each other on the other insulating substrate so as to be orthogonal to the X electrodes and Y electrodes, all gaps between the X electrodes and Y electrodes being formed to be

10 discharge gaps;

pixels arranged in a matrix form and formed at intersections between the discharge gaps and data electrodes; and

cell partitions provided on the insulating substrate

15 with the X electrodes and Y electrodes so as to be on the X electrodes and Y electrodes, for dividing surface discharge occurring between the X electrodes and Y electrodes, said cell partitions being provided at the boundaries between the electrodes and adjacent pixels in the data electrode

20 direction on the X electrodes and Y electrodes.

122. An AC type PDP according to Claim 121, wherein the cell partitions are disposed along the center lines of the respective X electrodes and Y electrodes.

123. An AC type PDP according to Claim 121, wherein

25 the X electrodes and Y electrodes are formed of transparent electrodes formed on the insulating substrate, and metal electrodes whose widths are smaller than that of the transparent electrodes are provided on these transparent

electrodes.

124. An AC type PDP according to Claim 123, wherein the cell partitions are disposed at positions opposed to the metal electrodes.

5 125. An AC type PDP according to Claim 124, wherein  
data side cell partitions are also provided on the  
insulating substrate with the data electrodes at positions  
opposed to the cell partitions.

126. An AC type PDP according to Claim 125, wherein  
10 the cell partitions and data side cell partitions are  
separated in the cells.

127. An AC type PDP according to Claim 126, wherein  
the widths of the data electrodes opposed to the cell  
partitions are smaller than the widths of the data  
electrodes at the positions opposed to the X electrodes and  
15 Y electrodes.

128. An AC type PDP according to Claim 127, wherein stripe partitions are provided between the adjacent data electrodes to divide pixels.

20 129. An AC type PDP according to Claim 128, wherein  
the data electrodes at the positions opposed to the cell  
partitions are positioned below the stripe partitions.